Mentoring: Community-based for children with disruptive behavior

Children's Mental Health: Disruptive Behavior

Benefit-cost estimates updated December 2019. Literature review updated May 2018.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our Technical Documentation.

Program Description: In community-based mentoring programs for children with disruptive behavior disorders, paraprofessional mentors are paired with youth with diagnosed disruptive behavior disorders. These youth are referred to mentoring by their mental health care providers. Among studies includes in this analysis, youth were 8 to 12 years old. On average, mentors met with their mentees for three to four hours each week over a period of eight weeks. Mentors engage in developmentally appropriate activities (e.g., playing games, sports) and promote and reinforce positive behaviors and goals (e.g., social skills, communication, affect regulation). Mentors debrief parents at the end of each visit and discuss activities, behavior, and goal progression. Paraprofessional mentors receive training on program guidelines, discipline strategies, structured activities, and mentor-parent interactions and receive regular supervision.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$1,749
Participants	$1,155
Others	$1,623
Indirect	($204)
Total benefits	$4,323
Net program cost	($1,728)
Benefits minus cost	$2,595

Benefit to cost ratio	$2.50
Benefits minus costs	$2,595
Chance the program will produce benefits greater than the costs	67 %

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2018). The chance the benefits exceed the costs are derived from a Monte Carlo risk analysis. The details on this, as well as the economic discount rates and other relevant parameters are described in our Technical Documentation.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Crime	$0	$63	$160	$32	$255
Labor market earnings associated with high school graduation	$1,007	$429	$550	$0	$1,986
K-12 grade repetition	$0	$13	$0	$7	$20
K-12 special education	$0	$400	$0	$200	$600
Health care associated with disruptive behavior disorder	$259	$917	$947	$459	$2,582
Costs of higher education	($111)	($73)	($33)	($37)	($255)
Adjustment for deadweight cost of program	$0	$0	$0	($864)	($864)
Totals	$1,155	$1,749	$1,623	($204)	$4,323

[1]In addition to the outcomes measured in the meta-analysis table, WSIPP measures benefits and costs estimated from other outcomes associated with those reported in the evaluation literature. For example, empirical research demonstrates that high school graduation leads to reduced crime. These associated measures provide a more complete picture of the detailed costs and benefits of the program.

[2]"Others" includes benefits to people other than taxpayers and participants. Depending on the program, it could include reductions in crime victimization, the economic benefits from a more educated workforce, and the benefits from employer-paid health insurance.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

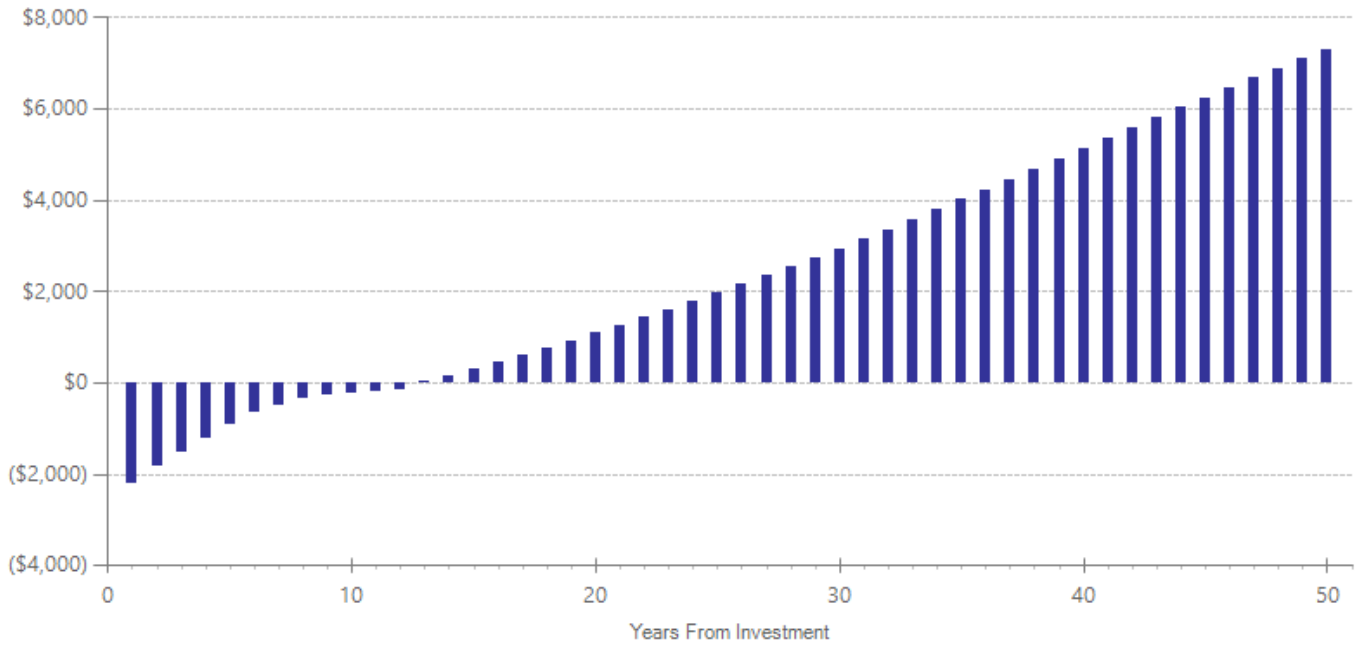
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$1,640	2016	Present value of net program costs (in 2018 dollars)	($1,728)
Comparison costs	$0	2016	Cost range (+ or -)	50 %

The per-participant cost estimate is based on a weighted average of the costs of each study and includes the cost of mentor time, training, materials, supervision, and any administrative costs. The studies included in our analysis did not report specific cost estimates, so we constructed the costs associated with mentor time based on the average time spent with each participant in direct interaction, time to train mentors, and the approximate time spent on administrative tasks per child as outlined in both Jent & Niec (2006) and Jent & Niec (2009) We estimate mentor salary using Washington State labor costs as reported by the Bureau of Labor Statistics.

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty in the cost estimate; more detail can be found in our Technical Documentation.

Detailed Annual Cost Estimates Per Participant



The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in non-discounted dollars to simplify the "break-even" point from a budgeting perspective. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost of the program up to that point in time. The program breaks even when the dollars reach $0. At this point, the total benefits to participants, taxpayers, and others, are equal to the cost of the program. If the dollars are above $0, the benefits of the program exceed the initial investment.

Meta-Analysis of Program Effects

Outcomes measured	Treatment age	No. of effect sizes	Treatment N	Adjusted effect sizes and standard errors used in the benefit-cost analysis						Unadjusted effect size (random effects model)	
				First time ES is estimated			Second time ES is estimated				
				ES	SE	Age	ES	SE	Age	ES	p-value
Disruptive behavior disorder symptoms	10	2	72	-0.275	0.256	10	-0.151	0.167	13	-0.782	0.003
Internalizing symptoms	10	2	72	-0.329	0.257	10	-0.329	0.257	12	-0.746	0.004

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our Technical Documentation.

Citations Used in the Meta-Analysis

Jent, J.F, & Niec, L.N. (2006). Mentoring youth with psychiatric disorders: The impact on child and parent functioning. *Child & Family Behavior Therapy, 28*(3), 43-58.

Jent, J.F., & Niec, L.N. (2009). Cognitive behavioral principles within group mentoring: A randomized pilot study. *Child & Family Behavior Therapy, 31*(3), 203-219.

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